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ABSTRACT

The Career Interest Card Sort is a vocational exploration procedure that was developed for use with adults in employment counseling, vocational guidance, and rehabilitation contexts. The card sort contains seven cards that clients are asked to rank in order of preference. The cards list seven work interests: outdoor, practical, scientific, creative, business, office, and people contact. The vocational interests are described on the reverse side of each card. The card sort is based on three principles: the simplest and most direct assessment approach is best; assessment of vocational interests show the pattern of a person's likes and dislikes and the individual ranking of preferences; and people should be compared to themselves just as much as they should be contrasted to others. The card sort's seven career interest areas correlate to Holland's six vocational types, and its validity was confirmed in a study of its administration by classroom teachers to 879 technical and further education (TAFE) students. Three case studies of the card sort's use in vocational assessment in a rehabilitation context confirmed its value as a coherent basis for exploring any further vocational or avocational areas. (15 references) (MN)

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USING A CAREER INTEREST CARD SORT FOR VOCATIONAL ASSESSMENT AND COUNSELLING

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USING A CAREER INTEREST CARD SORT FOR VOCATIONAL ASSESSMENT AND COUNSELLING

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This article describes the background to a direct assessment of interest categories without the use of a questionnaire. It is based on a card-sort procedure that focuses on Outdoor, Practical, Scientific, Creative, Business, Office and People Contact work interests. The rationale for the development of a *Career Interest Card Sort* is derived from previous research on the validity of self-estimates of vocational interests. Some data are provided on the Card Sort procedure. Directions and a case study on its use are also outlined.

USING A CAREER INTEREST CARD SORT FOR VOCATIONAL ASSESSMENT AND COUNSELLING

Most people are prepared to recognise the important role of interest in learning and work. Consequently, the exploration of career interests has always been a well-documented component of career counselling at least from the time of Parsons (1909) and right through to the modern socio-cognitive theories of interest development (eg, Lent & Hackett, 1994). This exploration of interests has been centred on indirect assessment through questionnaires or inventories and the purpose of this article is to outline an alternative and more direct approach for the consideration of career counsellors. This is based on an interest card sort that has been used in Australia.

Approaches to assessing interests

Not quite 50 years ago, Super (1949) described four basic approaches to assessing interests. These were classified as: *inventoried* (ie, standard questionnaires with responses summarised into interest categories); *tested* (ie, assessing the level of knowledge about a subject area); *manifest* (ie, the activities engaged in by a person as an indicator of how people use their time and as a guide to their interests); and *expressed* (ie, their stated and direct preference for an occupation).

Throughout a period of some seventy or more years, the focus of interest assessment has been upon inventoried interests using commercial interest questionnaires. This trend has continued unabated and interest tests are now one of the most widely used psychological tests. For instance, test publishers such as Psychological Assessment Resources, proudly announce in their catalogue that over 21 million copies of the *Self-Directed Search* have been published; or in the case of Science Research Associates that as far back as 1974 more than 50 million copies of the Kuder interest questionnaires had been distributed; and these are only two of the many major inventories.

Despite their importance and relevance for the concept of what it means to be interested in something, manifest, expressed or tested interests have largely been relegated from the mainstream of formal vocational assessment instruments. They often form part of a 'qualitative' assessment of a person's preferences or are encompassed within an interview.

Expressed interests are quite powerful predictors of future occupational choices. They simply involve someone saying what they want to do or what they think they will end up doing, and their long-term accuracy approaches that of inventoried interests. The importance of an expressed interest is that it exploits self-knowledge and the vast

amount of information that a person has about his/her own history. This is especially the case in those who are more mature.

Given that fundamental vocational interests tend to show some stability after adolescence there would appear to be some advantage in merely asking people about their interests. There have been two further developments that build upon the work in expressed interests and the following section shows how interest card sorts and self-estimates also exploit this advantage.

Card sorts and self-estimates as methods for assessing interests

Firstly, Tyler (1961) introduced the concept of an occupational card sort that permits a qualitative assessment of a person's occupational interests and preferences by asking people to physically sort occupations on cards into those they liked, disliked or to which they were indifferent. Originally, this was developed as a non-sexist approach to assessment and it now features in many occupational and pictorial card sorts.

Secondly, the use of self-estimates of interest has also proceeded in the background. Self-estimates are like inventories but instead of having many questions they merely indicate to a person what are the main categories of interest (eg, Outdoor, Practical, Scientific, Creative, Business, Office and Practical) and ask him/her to estimate their level of interest by either rating or ranking interest categories. The power of estimates to produce results that are comparable to the information obtained from the longer and more detailed interest questionnaires was doubted for many years but on closer inspection self-estimates yielded broadly similar information. Self-estimates can be thought of as a 'mini-inventory' that derive their validity largely because they also seek to assess the entire domain of interests in a standardised manner. Athanasou and Cooksey (1992) reviewed empirical evidence from eleven studies that covered 1,745 high school, college and patient populations and reported a median correlation of 0.77 between self-estimates and measured interests.

Career Interest Card Sort

Continuing and combining these three traditions - namely expressed interests, card sorts and self-estimates - a *Career Interest Card Sort* was developed that does not use proprietary interest categories such as those of Holland or Kuder. It was modelled on an earlier and preliminary card sort that was based on Kuder's interest classification (Athanasou, 1980) but was restructured in order to be used in studies of the vocational interests of unskilled workers (see Hosking & Athanasou, 1997). The *Career Interest Card Sort* is a vocational exploration procedure for use especially with adults in employment counselling, vocational guidance and rehabilitation contexts. The purpose of this article is to describe its potential for use in other career counselling contexts.

Content. of the Career Interest Card Sort

The *Career Interest Card Sort* contains seven cards (105mm by 145mm) that the client has to rank in order of preference. The cards list seven work interests – Outdoor, Practical, Scientific, Creative, Business, Office and People Contact work based on the *Career Interest Test* (Athanasou, 1988). The interest categories and descriptions are summarised in Table 1. Descriptions of each vocational interest are listed on the reverse of each card (a copy of the Career Interest Card Sort is available freely from the authors upon request).

Table 1. Interest categories and descriptions from the Career Interest Card Sort

OUTDOOR	outdoor interests means that you like to work and move about outside. It also involves caring for animals and growing things. Farmers, foresters, landscape gardeners, surveyors, and sportsmen/women are among those high in outdoor interests
PRACTICAL	practical interests means that you like to work mainly with tools and equipment, making and fixing things as well as operating machines. Jobs in this area include pilots, factory workers, technicians, builders and engineers
SCIENTIFIC	a scientific interest means that you like to discover ideas, observe, investigate and experiment. It includes medical and health occupations. Doctors, pharmacists, zoologists, chemists, dentists and physicists have high scientific interests
CREATIVE	a creative interest means that you like to express yourself. It includes artistic (such as artists, photographers, signwriters, designers) occupations, musical (such as composing, dancing, singing or instrument-playing) occupations, or literary (actors, writers, editors, reporters and advertising) occupations
BUSINESS	business interest means that you like meeting people, talking, discussing, and leading others such as in law, politics, buying and selling. It also involves business relations with people, as with travel agents, shop keepers, executives and managers
OFFICE	an interest in office work means you like working indoors, and at clerical tasks which involve organising and being accurate. Clerical jobs such as secretary, office worker, receptionist, bank clerk or computer operator are in this category. An interest in office work may also mean that you like to work with numbers and do calculations
PEOPLE CONTACT	an interest in people contact means that you like to work mainly with people or that you are concerned with their social welfare. The work of teachers, nurses, police officers, and welfare workers involves a great deal of personal contact. It can also include jobs such as sales, cashiers, waiters and secretaries

Rationale of the Career Interest Card Sort

The rationale underlying the interest card sort is the principle of using the simplest and most direct assessment approach. For instance, it is not always necessary for a careers counsellor to ask a mature adult to answer hundreds of questions in an inventory, that are then grouped into categories, in order to produce a ranking of interests that might reasonably be obtained, by just asking them what the counsellor wanted to know in the first place. This is especially the situation with interests because there is no reason for deception in counselling and guidance contexts.

A further rationale is that the assessment of vocational interests should be ipsative in nature, showing the pattern of a person's likes and dislikes and the intra-individual ranking of preferences. Accordingly, it is important to assess the entire domain of interest (ie, all interest categories). Furthermore, a rationale for this assessment approach is that it is idiographic and qualitative in nature, while still offering quantitative ranking. It focuses on a description of the individual and his/her responses rather than comparing results to a normative group. This approach emphasises that people should be compared to themselves, just as much as they should be contrasted to others, in order to determine their uniqueness and their talents.

Additionally, a practical rationale was to produce an assessment that is economical and quick to administer, that is acceptable to a broad range of adults, that does not have the 'methods' or rating effects of many questionnaires and which does not involve considerable reading.

Administration of the Career Interest Card Sort

The card sort would only be used as part of a vocational assessment or in a counselling context once rapport has been established. The careers counsellor should explain that the aim is to find out what are the client's work interests and preferences. Simple instructions, such as the following have been found to be useful:

> Here are some cards with different types of work listed on them. Look at them and tell me which one you like most, second most, third most etc. There are some descriptions of the work categories on the back, if you need them.

The careers counsellor should feel free to answer any questions or to extend the descriptions so that they are understood. For instance, the counsellor may wish to check that the categories are understood. From experience, the Creative category in particular, may need to be re-defined as artistic, literary or musical in order to distinguish it from the general desire to contribute uniquely.

Interpretation of the Career Interest Card Sort

Any interpretation would depend upon the context for the use of the *Career Interest Card Sort*. Firstly, the counsellor the counsellor may wish to ask why some categories were chosen and others rejected. Various perceptions, stereotypes or self-efficacy may support choices. Secondly, a counsellor may consider some technical aspects of interpretation, namely the coherence of choices in terms of Holland's hexagonal ordering of interests. For instance, you would not normally expect to see Scientific and Business interests ranked first and second, nor Office and Creative, nor

Practical and People Contact. The equivalent Holland and *Career Interest Card Sort* categories are shown in Table 2.

Table 2. Comparison of career interest categories with Holland typology

Career interest	Holland vocational type
Outdoor	Realistic
Practical	Realistic
Scientific	Investigative
Creative	Artistic
Business	Enterprising
Office	Conventional
People contact	Social

Validity and Reliability of Results from the Career Interest Card Sort

Results of previous studies support the use of such self-estimates and a program of Australian research has established their convergent and discriminant validity as well as reliability (see Athanasou, 1980; Athanasou & Evans, 1983; Athanasou & Cooksey, 1991; 1993a, 1993b; Cooksey & Athanasou, 1994).

The *Career Interest Card Sort* was also administered in a written format by classroom teachers to 879 technical and further education students (37% male; 63% female) from 20 colleges in order to determine the relationship between rankings of the categories. The results are summarised briefly in Table 3.

Table 3. Intercorrelations of rankings on the Career Interest Card Sort (N=879)

	OU	PR	SC	CR	BU	OF	PC
OU-Outdoor	-	21	-05	-01	-39	-51	-20
PR-Practical		-	05	-23	-21	-35	-38
SC-Scientific			-	-06	-33	-25	-19
CR-Creative				-	-19	-23	-02
BU-Business					-	30	-06
OF-Office						-	08
PC-People contact							-

Decimal points omitted

The average test retest reliability for a group of 31 adults over a one to five week period was 0.639 for the seven rankings while the mean level of congruence on the Iachan (1984) scale was 23.6 (on a scale from 0 to 28, with 28 being perfect congruence). These results are impressive not only because the correlation was based on a mere seven rankings but also because there are 5,040 potential combinations of the seven interests.

Case Studies using the Career Interest Card Sort

Three case studies from the use of the *Career Interest Card Sort* in vocational assessment from a rehabilitation context are outlined below. The socio-demographic details of the cases have been altered randomly to prevent any possible identification. In each of these cases, this straightforward assessment of interests was considered helpful as a coherent basis for exploring any further vocational or avocational areas.

Case #1:

Demographic details: Female, 25 years, single parent with one child

Education: Higher School Certificate, no post-school qualifications or training, discontinued university, now enrolled in university preparation course

Employment history: casual positions in retailing, hospitality, bar and club work

Disability: disclocated elbow, wrist at work

Assessments: reading at post-high school level; adequate grip strength 30kg in the right hand and 20kg in the left hand; reasonable back-leg pull strength 155lb force; reduced manual dexterity in the left hand on the Purdue Pegboard; work values – security, knowledge, independence, recognition

Interests: People contact, Business, Creative, Practical, Office, Outdoor, Scientific

Stated career goal: human resources or management course at TAFE

Case #2:

Demographic details: male, 35 years, single

Education: School Certificate, completed carpentry trade course, now enrolled in real estate sales course and completed first semester

Employment history: stores work prior to obtaining an apprenticeship as a carpenter, then some short-term work as a tradesperson (never more than 2yrs with any employer) plus some self-employment; now employed as new car salesperson

Disability: severe electrocution followed by emotional consequences (anxiety, depression)

Assessments: reading at middle-high school level; adequate grip strength 48kg in the right hand and 50kg in the left hand; back-leg pull strength 300lb force, which is average for males; adequate manual dexterity; work values – helping others, stability, high earnings, security, status; personality – high scores on extraversion; very high scores on neuroticism (anxiety) plus high score on lie scale.

Interests: People contact, Creative, Business, Outdoor, Office, Practical, Scientific

Stated career goal: uncertain

Case #3:

Demographic details: male, 35 years, married, receiving disability support pension

Education: School Certificate, no post-school qualifications or training

Employment history: shop employee, general factory hand and leading hand for 5yrs, newsagent 3yrs

Disability: lower back pain with major surgery

Assessments: reading at middle-high school level; adequate grip strength 40kg in the right hand and 44kg in the left hand; inadequate back-leg pull strength 50lb force;

Interests: Business, Office, People contact, Practical, Creative, Outdoor, Scientific

Stated career goal: nil realistically

Discussion and Conclusions

The use of a card sort that is linked to a standard classification of interests can serve career counsellors in their daily practice in counselling and/or assessing adult clients. The present report provides a framework and methodology that has some empirical support and one that is also based on the findings of earlier studies that validated the use of self-estimates of interests. Further evidence of its validity, reliability, and utility are required.

At present, we have settled for seven categories because the aim is to achieve an economical, quick and valid assessment that can be used for exploration, assessment or research. An interest card sort could be linked to more than seven interest categories and there might be some instances in which a more specific categorisation would be of greater use. The disadvantage of having too many categories is the impossibility of ranking beyond those at the extremes. If ranking is not important then it should be possible to extend the range of categories but this would also extend the time required as well as increase the cognitive load of the task.

The seven categories appear to be well within the cognitive capacity of unskilled workers. The present card sort may, therefore, find some application in a range of counselling and assessment contexts. It may also serve to complement the existing traditional inventoried assessments. It is considered as only one basis or one of the many potential approaches to assessing interests, but one which may warrant further consideration. Furthermore, the use of this card sort retains the advantage of being able to link findings to a major theoretical classification, such as that of John Holland's vocational typology. Finally it significant advantages for field researchers because it permits an idiographic picture of a person's vocational interests, and offers the opportunity not only for further qualitative exploration but also provides an ipsative and quantitative ordering of preferences.

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